

FACILITY 1
(Naval Hospital Guam)
Fahrenholt Avenue
Agana Heights
Guam
Guam

HABS GU-3
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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN BUILDINGS SURVEY
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001

HISTORIC AMERICAN BUILDINGS SURVEY

FACILITY 1 (NAVAL HOSPITAL GUAM)

HABS NO. GU-3

- Location:** Facility 1 is located in the western block of the 47-acre Naval Hospital Guam complex. The building faces south to Fahrenholt Avenue, which is the main road that traverses the hospital complex. Naval Hospital Guam is situated on a ridge at Agana Heights, an area located approximately 500 m from the shoreline in the middle of the island of Guam.
- Present Owner and Occupant:** Department of the Navy
- Present Use:** Facility 1 contains the primary medical service facilities offered to military members and their dependents. These include family practice, OB-GYN, pediatrics, general surgery, anesthesia, internal medicine, psychiatry, psychology, occupational health and preventive medicine, emergency medicine, dental surgery, urology, otolaryngology, ophthalmology, optometry, acute care, physical therapy, dietician, health promotions and social work services.
- Significance:** Facility 1 played a major support role to other medical facilities in Asia during the Cold War. Injured military personnel from Vietnam were airlifted to Facility 1 for medical treatment. Its final role in the Vietnam War effort consisted of the interim care of about 100,000 refugees from South Vietnam on their way to US under Operation New Life.

Facility 1 is also significant for its design and engineering which successfully withstood Typhoon Karen in November 1962. Facility 1 set an example for the design and engineering of permanent buildings on Guam, not only for military facilities but also civilian buildings.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. **Date of erection:** 1952-1954. Plans were approved in 1951; construction was underway by early 1952. The hospital was completed in late 1954.¹
2. **Architect:** Pacific Island Engineers, a joint venture of Frederick R. Harris, Inc. (New York City), Blanchard & Maher and Keller & Gannon (both of San Francisco). Pacific Island Engineers (the Navy's architectural-engineering consortium) won the design contract for all Navy facilities and installations planned for construction on Guam at the end of World War II. The Naval Hospital Complex was one of several permanent facilities that the Pacific Island Engineers designed for the Navy in Guam.
3. **Original and subsequent owners:** Department of the Navy
4. **Original plans and construction:** Original drawings by the Pacific Island Engineers were dated October 25, 1951. Final construction cost for Facility 1 and other facilities included in the Naval Hospital Guam complex was estimated at \$10.7 million, with the design cost of about \$11 million.²
5. **Alterations and additions:** The original aluminum awning type windows have been replaced with roll-up typhoon shutters. Many window openings have been completely infilled with concrete. The original porches along

¹ Planning and design of the Naval Hospital Complex occurred over a five-year period, 1947-1952. For details of this process, refer to Mason Architects Inc. and Weitze Research. 2009. *Evaluation of Historic Resources at Naval Hospital Guam* (Draft). Prepared for Naval Facilities Engineering Command Pacific, Honolulu.

² Department of the Navy. *Record Report for Contract NOy-13626 Volume I: Narration and Completion Report for Contract NOy-13626*. January 15, 1953.

the length of ward areas in the second and third floors of Units A, B, D and E have been fully enclosed with wall infill and paired two-lite windows. The north-facing solarium windows at the ends of Units A, B, D and E have been removed and infilled with concrete.

There have been additions to the various units of Facility 1. A concrete covered walkway leads from western side of Unit A to the road towards Facility 12, Nurses Quarters. Along the east side of Unit F, an overhead cover for ambulances has been added. A short, concrete covered walkway ramp has been attached to the back entry of Unit F. A small building has been added on the third floor of Unit G just above the main entry. At Unit C, the entry at the end has been enclosed. Wheelchair ramps, in compliance with the American Disabilities Act, have been constructed in several entrances to Facility 1.

B. Historical Context

The history of Naval Hospital Guam began in 1899 with the arrival on the island of a United States Navy medical mission aboard the USS Yosemite. At that time, no western medicines or doctors were available for the civilian population on the island. The Medical Officer and medical staff of the USS Yosemite spent several months treating the civilian population and military dependents.

The wife of the Governor of Guam, Maria Schroeder, saw the need for a hospital for dependents and civilians. She spearheaded a fundraising campaign and was so successful that construction was initiated in 1901 and opened in 1902. The Maria Schroeder Hospital was destroyed by an earthquake on September 22, 1903. The US Government appropriated funds for a new women's hospital and was built on the land of the Schroeder Hospital.

By the end of World War II, the Japanese had destroyed the hospital. US military engineers constructed temporary type facilities (Quonset huts) in several locations on Guam to serve as hospitals, medical school, and laboratory. By late 1940s, medical treatment on Guam was provided by two facilities: the Guam Memorial Hospital (for the civilian population) and the Naval Hospital Guam (for the military). The first Guam Memorial

Hospital (1946-1955) was a 300-bed conversion of Quonsets to serve the civilian population.

In 1947 the Navy commissioned the Pacific Island Engineers, a consortium composed of Frederic R. Harris (New York firm) and Blanchard & Maher and Keller & Gannon (two San Francisco firms), to plan a project called "Medical Center (Naval and Native Hospitals) – Island Command Area." At that time, Pacific Island Engineers was the Navy's design contractor for all post-World War II facilities construction on Guam. Planning for the medical center and its location took several years as various studies and analysis of facilities design were carried out between Pacific Island Engineers and the Navy's Bureau of Yards and Docks.

Final design and engineering of the hospital complex occurred in 1950-1952. There were two factors that influenced the design of the hospital (Facility 1). One was the design of the Naval Hospital at Beaufort, North Carolina. The hot, humid climate of South Carolina is similar to Guam. Basic design features of the Beaufort hospital such as a pavilion layout, high number of windows and screened-in porches were used in the design of Facility 1. Two is the role of Arsham Amirikian, a noted and prominent engineer at the Bureau of Docks and Yards in Washington, D.C., who was the chief engineer in 1951. His knowledge of protective construction was applied in the structural engineering of Facility 1. Facility 1 of Naval Hospital Guam was designed as a:

...completely monolithic reinforced concrete structure from the spread and wall type foundation footing to and including the roof except for construction joints and the steel truss over the auditorium. The units [11 interconnected, alpha-designated wings and central core] are separated by earthquake joints to prevent structural damage from seismic causes. Lateral forces, earthquake and wind, are carried through the floors acting as diaphragms to shear walls and thence to the foundation. The structure is designed for high [125 miles per hour] winds loads. ...Earthquake joints are provided where the several units abut, the joints being

open for either 4 inches or 8 inches and carried from first floor line through the roof.³

Design features incorporated in Facility 1 that were intended to address climatic and other natural disasters include: 12-inch thick exterior reinforced concrete walls; 8-inch concrete roof slab; screened porches; inset horizontal bands of awning windows; aluminum awning-type windows; and reinforced concrete canopies and overhangs.

A collaborative effort of the Navy's Bureau of Docks and Yards and Pacific Island Engineers oversaw construction of Facility 1 and other ancillary facilities at Naval Hospital Guam. By November 1954, construction of the new Naval Hospital Guam complex was completed. Upon its completion, the administration and physical location of Naval Hospital Guam was finally separate from the Guam Memorial Hospital.

Facility 1 played a major support role to other medical facilities in Asia during the Vietnam War. Wounded troops from Vietnam and Southeast Asia were airlifted to Naval Hospital Guam for medical treatment of injuries. Patients who recovered returned to duty while others with more serious injuries were provided intermediate care and then sent to mainland United States (US) for additional care and treatment. Its final role in the Vietnam War effort consisted of the interim care of about 100,000 refugees from South Vietnam on their way to US under Operation New Life.

Due to its design and engineering, Facility 1 successfully withstood Typhoon Karen in November 1962. Typhoon Karen was described by the US Fleet Weather Central/Joint Typhoon Warning Center as being equal to a "near-miss by a nuclear bomb," but without the heat and fall-out contamination. This typhoon caused destruction and extensive damage to Guam's landscape and many buildings. Facility 1 set an example for the design and engineering of permanent buildings on Guam.

³ Record Report for Contract N0y-13626; Volume II: *Project Analysis of Design Features* 15 February 1953.

In mid-June 1991, Facility 1 once again played a major supportive role during the Operation Fiery Vigil—the evacuation of US military and their dependents from the Philippines after the eruption of Mount Pinatubo on the island of Luzon.⁴ Operation Fiery Vigil was the largest peacetime evacuation of active duty military personnel and family members in US history.

Facility 1 provided medical care to Kurdish, Muslim, Iraqi, Iranian, and Turkish evacuees from Iraq under Operation Pacific Haven in 1996-97. The medical staff went through a cross-cultural experience in treating the women and the delivery of several babies. As the tradition of these peoples, the male relatives refused to allow the male medical staff to see or touch their female relatives. It was a challenging time for the medical staff.

One of the most heroic roles that Facility 1 played in the hospital's recent history was its involvement during the crash of a civilian airliner, Korean Airlines Flight 801, on August 6, 1997. Over 200 medical staff responded to the search, rescue and retrieval, and identification of casualties. Of the small number who survived, 19 were treated at Naval Hospital Guam.

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

- 1. Architectural character:** Facility 1 is a monolithic reinforced concrete structure, consisting of several wings of different sizes and configurations. It is a functionally designed building, with very little ornamentation on its exterior walls. Ornamentation is focused in the main entrance with the Naval Seal on the main façade and a plaque relating to its history located on the main entrance portico. Concrete covered walks lead to the sides of the building from the west side parking lots adjacent to Wing A.

⁴ Information regarding historical significance of Facility 1 was provided by Ms. Alice Adley, Historian of Naval Hospital Guam, in a telephone interview in February 2010.

2. **Current condition of fabric:** The Navy Hospital building, its parking lots and lawns are in a very good condition, with evidence of continuous maintenance. The in fills of former windows are very evident, and the same has been painted identically as the rest of the exterior walls. The exterior walls are generally in good maintained condition as well. The exterior doors and windows are likewise well maintained.

B. Description of Exterior:

1. **Overall dimensions:** The total height of the building from its basement floor is 74' 7". The overall dimensions of the building footprints in its totality in square feet cannot be averaged because of the difference in configurations, shapes and sizes of each wing.⁴
2. **Foundations:** The foundation of the entire Facility 1 is of concrete wall foundation. The wall foundation also serves to house the basement functions of the building. The basement houses some of the mechanical machinery, engineering storage, some administrative offices, maintenance and housekeeping services.
3. **Walls:** The walls are of reinforced concrete, about 8 to 10 inches thick including the plaster finish, and painted mostly ivory on both sides. Some exterior areas show a concrete plaster with sandblast finish. There are vertical stainless steel joints that are visible in strategic sections of the exterior walls of the building. These joints serve as earthquake joints useful in protecting the building from severe damage during tremor attacks.

⁴ In plan, however, if we were to frame the building in a rectangle to include all the wings in the hospital, the entire Navy Hospital Main Building approximates a footprint of 500' by 700'. This information is taken from a photo (Fig. 4. Map of the Hospital Complex Area 2008 --Guam Grid Maps with Building Data, Naval Hospital; Source – NAVFAC PAC) included in the *Evaluation of Historic Resources of Naval Hospital Guam*, prepared by Mason Architects Inc, and Weitze Research in May 2009.

4. **Structural system, framing:** Facility 1 is of reinforced concrete columns, beams and walls. Exposed, free standing columns on the exterior support the roof slabs of porches. The horizontal slabs are also reinforced concrete slabs in between each floor. The roof slab is of reinforced concrete.

The covered walkway ramp in Wing F on the west side of the building features precast concrete slab units on its roofing, supported by reinforced concrete posts and walls. In Wing A, there are buttressed structures supporting an extension floor rising from the grade line to mid ground floor level. These structures are not present in the other wings, and are unique only in this area of the hospital.

5. **Porches, stoops:** There are roofed porches (as set apart by mere landings on side entrances) only in entrance openings in the front of the building, in the rear side, and in the emergency entrance. The biggest and the most prominent one is the porch in the main entrance of the hospital in Wing J. The main entrance porch features round bar metal railings surrounding the outer sides and a glass paned, steel framed entrance wall. The glass wall is equipped with typhoon shutters. The flooring is painted with gray colored non skid paint. The ceilings, posts and concrete walls are in sandblasted finish painted ivory white.

The side metal door entrances feature stoops with a landing on top of the stairway, but do not have porches. Some of these landings are roofed with corrugated galvanized iron roofing. Some of these landings are on elevated openings and have metal stairways with round iron bar railings leading to them.

6. **Openings:** The doors and windows of Facility 1 mostly feature functionally designed openings, without ornamentation.

- a. **Doorways and doors:** All the exterior doors are featured with steel typhoon shutters protecting the doors during heavy winds and typhoons.

Exterior doors located in the side entrances are single swing doors, clad in metal sheets with metal frames. The Main Entrance doors in Wing J and emergency entrance doors on Wing G are double

swing doors, of heavy steel frame painted grey, with reflective glass panes. The rear of the building entrances are also of the same steel framed glass paned swing doors and also have steel typhoon shutters. Exterior doorways are fronted with either ramps or stairways, and in some areas, both ramps and stairway.

- b. Windows:** Most windows are steel framed, either of the awning type or sliding glass paned windows. Most are featured with two glass panels, the upper panel being fixed and the lower panel of the awning swing type. The glass paned windows are framed in metal, covered with a flat bronze finish. They are mostly also equipped with roll down steel typhoon shutters with vertical slide frames on the exterior. Not all windows are protected with a concrete slab cantilevered awning above them. The typhoon shutter mechanism storage above the windows also serves as a narrow awning protection for most windows.

Wings A, B, D, E, and J show concrete in fills on previously existing windows. They are plastered and painted in ivory white, as is the color of the rest of the wall; however, the infill markings are still visible.

- c. Ceilings:** The ceilings of the exterior porches, exit and entrances are plastered concrete, and are of sandblast finish, painted ivory.

7. Roof: The roof slabs in the buildings are flat roof decks.

- a. Shape, covering:** The roof is flat, and is a reinforced cement monolithic slab, waterproofed and finished with sandblast finish. A portion of the roof features a built up room on top of Wing J and another one in Wing F features a tank with an exposed steel ladder for possible entry from above the tank.
- b. Eaves:** The horizontal eaves or awnings of the buildings are cantilevered slabs, and in reinforced concrete. Some of these window awning slabs cover a line of windows while others feature individual concrete slabs over each window. In some locations, the roller shaft housing mechanism storage also serves as hoods above the individual windows.

C. Description of the Interior: The interior of the Hospital is clean, functional, well lighted, and equipped with signage to lead patients and guests to destinations within the buildings.

1. Floor plans: Information in this section is taken from a review of the as-built drawings from the NAVFAC Pacific office. These drawings were made by Frederic Harris, Inc; Blanchard & Maher – Keller & Gannon Architects and Engineers.

a. First floor: The First Floor mostly houses administrative offices, the pharmacy, doctors offices, and the main entrance. A main corridor traverses the center of the hallways. The hallways and the interior walls are mainly painted white, portions of which are in concrete and in some other portions, laminated boards.

The main entrance interior lobby contains numerous memorabilia of important persons and events of the history of the hospital.

b. Second floor: The second floor at the main hospital consists of more hospital service offices, wards, examination rooms, quiet rooms, and hospital doctor's offices. A center corridor serves as pathways to destinations and to each wing, marked at the top of the main entries to the wings. There are wooden grab bars (or gurney rails) on the white painted walls.

c. Third floor: The third floor features a quieter main corridor at the hallway passages. The corridors are with windows on one side, unlike the central hallways of the floors below. All walls are painted white and all sides have wooden handrails (or gurney rails) fastened to the walls. The auditorium is on this floor.

2. Stairways: Most stairways are concrete clad in homogenous textured tile finish, in brown, with grey aluminum tread guards. The feature round black painted pipe railings fastened to the stairway guard walls.

3. Flooring: The finished flooring is made of 12" by 12" vinyl tiles in ivory / and off white with various contemporary design patterns. In some areas,

the tiles are mixed as a result of unmatched replacement of the old/original tiles, which illustrates a situation when contractors are unable to match the existing tiles.

4. **Wall and ceiling finish:** Hallway walls are painted mostly in white or beige. Baseboards are painted black to about 6" above the floor. Most ceilings are dropped in the hallways, although inside some offices, the cement slab is seen along the exposed ducting and the light fixture hangers. The dropped acoustical boards rest on either stainless steel or aluminum frames, are mostly in pure white color; however, there are some pieces in egg white color (possibly attached to replace old ones but the same color of tile was not available) .
5. **Openings:**
 - a. **Doorways and doors:** Entrances to perpendicular wings are clearly marked on the doorway or corridor entrances along the main artery building. Interior hallway entrance doors are made of wood, in natural finish, with sidelights. They are swing doors, opened by a metal push bar and pulled by a lever type knob. The doors can be kept open, before pushing them back to close manually.
 - b. **Windows:** The windows described in the exterior portion above do not feature any curtains in its interiors, specifically in the public areas. Most windows are of the awning type, with glass panes framed in flat powder coated paint finish metal frames.
6. **Decorative features:** There is not much ornamentation in the interiors of the Navy Hospital. The interiors, however, are neat, functional and visitor friendly, even to the disabled. Ample signage is provided to guide the visitors around the hospital.

The only well-decorated area is the lobby at the Main Entrance. On display are various military memorabilia, photos, and plaques regarding history of the US Navy Hospital.
7. **Hardware:** Utility features and associated wiring, such as light switches, convenience outlets, fire alarm buttons, electrical switches, and lighted signage are exposed on the walls, and mostly painted white. Fire hydrant

boxes are located along the walls. Drinking fountains are also scattered throughout hallways. The hospital hallways, the lounges, and stairways are equipped with a natural lacquered finished top railing secured with metal fasteners and supports. These are positioned about 2" from the walls.

There is a mixture of types of air conditioners (A/C) – both split type and window air conditioners are present. In some areas of the hospital, several rooms share the A/C units via a distribution duct.

9. **Mechanical systems:** The elevators are original, and are made of thick stainless steel casings and walls. Hydraulic mechanisms open and close the steel roll up shutters/doors of loading bays. Rubber Bumpers protect the base of the roll up doors.
 - a. **Water Heating / Steamers:** The steamers for the laundry are on top of the roof deck. The Boiler ensemble is on the ground outside in the rear side of the building, between Wings C and D.
 - b. **Plumbing (Water Supply, Sanitation and Storm Drainage):** Water supply pipes and sewage pipes are visible in the basement. Rain water downspouts are made of cast iron round pipes in Wing A while those in Wing B/G are of a mixed material, either in a square/ or rectangular galvanized Iron pipe configuration and square cast iron pipes. These differences in material usage may pertain to differing periods in installation of these pipes. Rain water downspouts drain toward concrete grillwork covered catchments on the ground level. It is presumed that there is a channeled underground system for the rainwater runoff.
 - c. **Electric:** Lighting fixtures in hallways are made of fluorescent lights with diffusers. Illumination inside the rooms is also of fluorescent lights. Safety lights are used outside in the entrance ways.
- D. **Site:**
 1. **Historic landscape design:** The hospital contains common-place landscaping features with few trees and grass-covered lawns. The main entrance garden where the flagpole is situated is the only

area which is landscaped with pathways and ornamental flowering shrubs. There is a rotunda at the Emergency Room delivery area, with one coconut tree. Coconut trees are also found along Wing L.

2. **Other buildings:** There are two covered sheds at the north edge of the property facing the sea where workers converge during their breaks.

The Emergency Room delivery is located along Wing F and features a roofed parking area sufficient for four (4) ambulance vans.

PART III. SOURCES OF INFORMATION

- A. **Architectural drawings:** "As-built" drawings dated 1951-1952 are stored at the Technical Library of Naval Facilities Engineering Command Marianas, US Navy Main Base, Guam. Drawings on various repair, replacement and maintenance work conducted on Facility 1 are also located in this facility.

- B. **Interview**

Alice Hadley, Historian, Naval Hospital Guam. February 2010 via telephone.

- C. **Bibliography**

Anonymous. Crossroads of the Pacific. Vol. VIII, No. 21, pp-6-7. November 19, 1965.

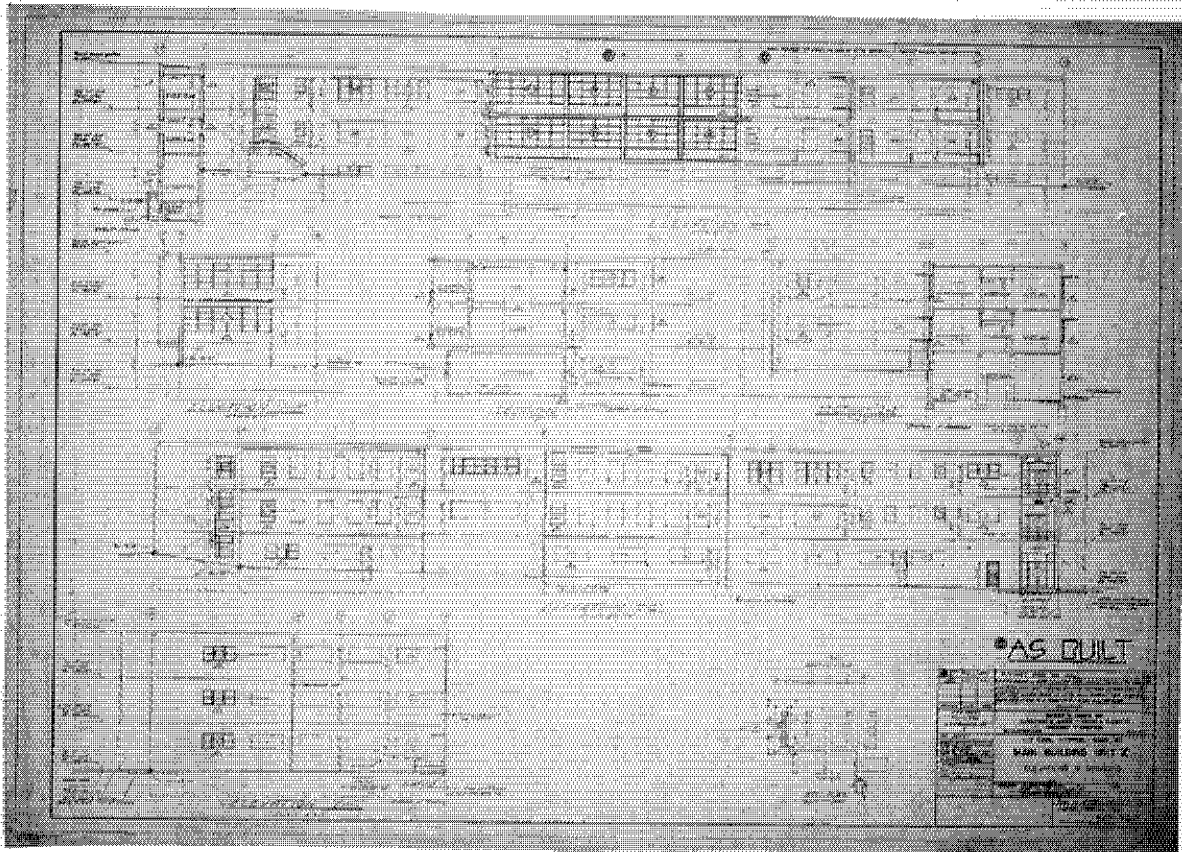
Frederic R. Harris, Inc (New York), Blanchard & Maher (San Francisco), and Keller & Gannon (San Francisco). *Record Report for Contract N0y-13626. Volume II: Project Analysis of Design Features*. January 15, 1953. NAVFAC Marianas Technical Library. Navy Main Base, Guam.

Mason Architects Inc. and Weitze Research. "Evaluation of Historic Resources at Naval Hospital Guam." Unpublished project report on file at Naval Facilities Engineering Command, Pacific. Honolulu, Hawaii. May 2009 (draft).

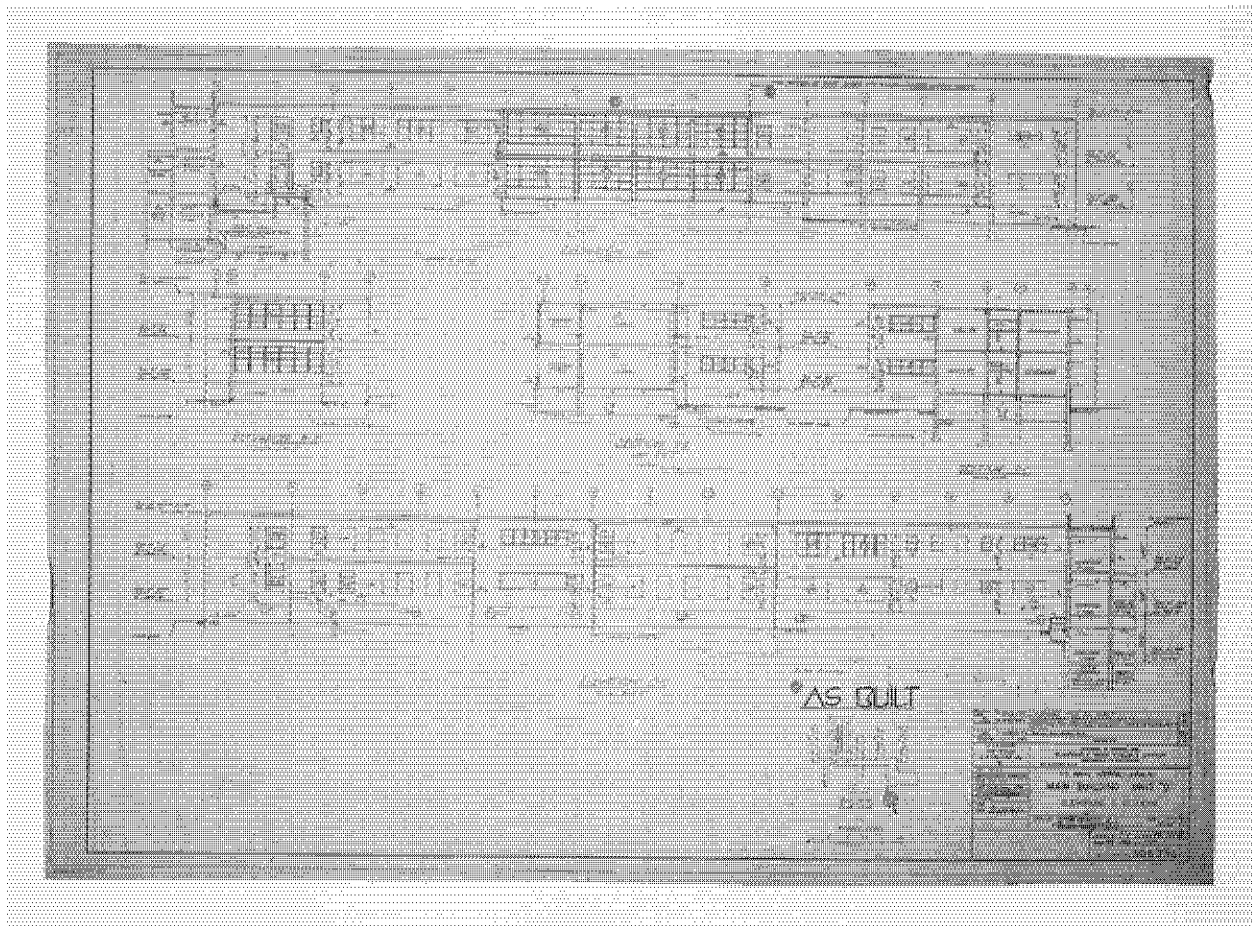
Pacific Island Engineers. Frederic R. Harris, Inc (New York), Blanchard & Maher (San Francisco), and Keller & Gannon (San Francisco). As-Built drawings for Naval Hospital Guam, 1951-1952. On file at NAVFAC Marianas Technical Library, Navy Main Base, Guam.

PART IV. PROJECT INFORMATION

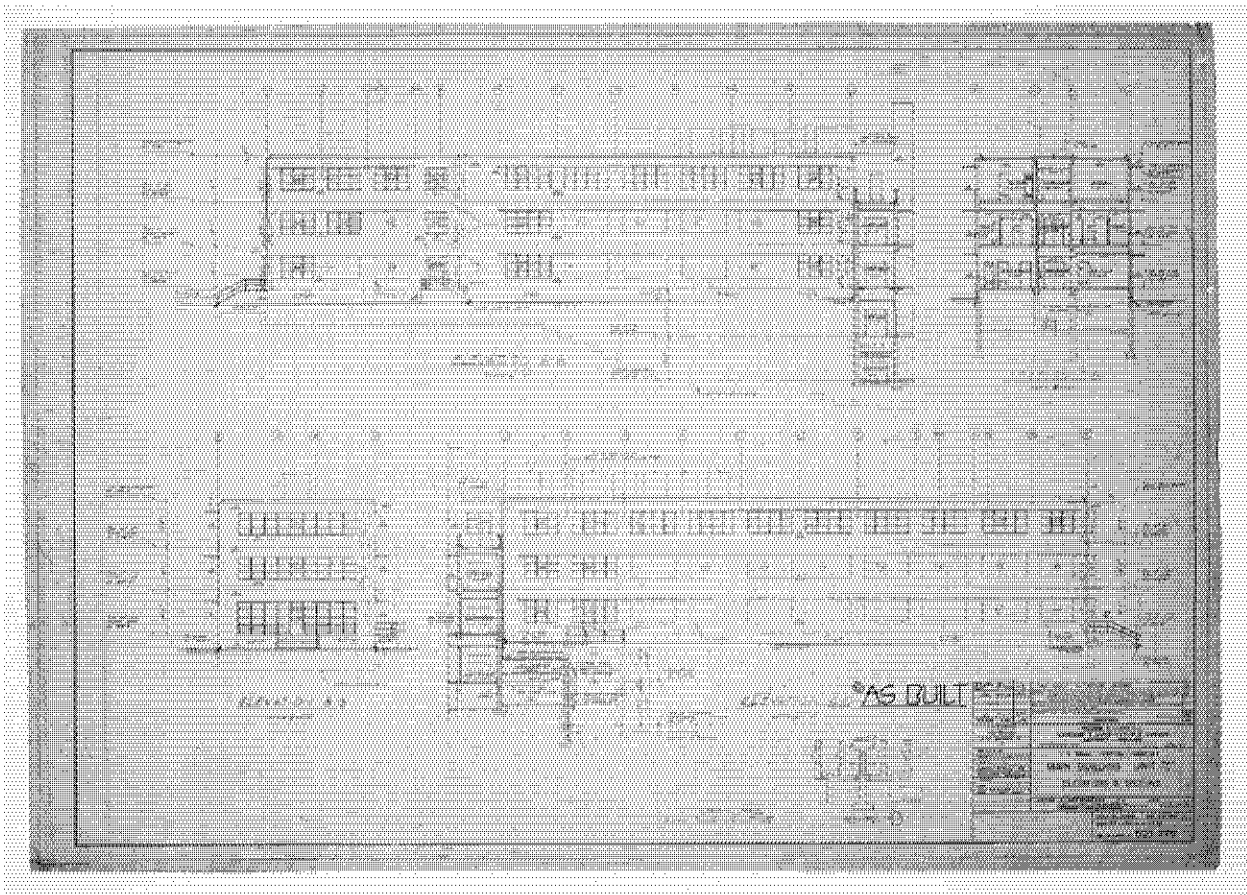
This project was sponsored by Naval Facilities Engineering Command (NAVFAC), Pacific through a contract with the Micronesian Area Research Center, University of Guam. The documentation was conducted by Ms. Maria Lourdes Joy Onozawa, Historical Architect; Ms. Annie Griffin, HABS Historian; and Mr. David Franzen, HABS Photographer. Fieldwork was conducted in November 2009 and February 2010.



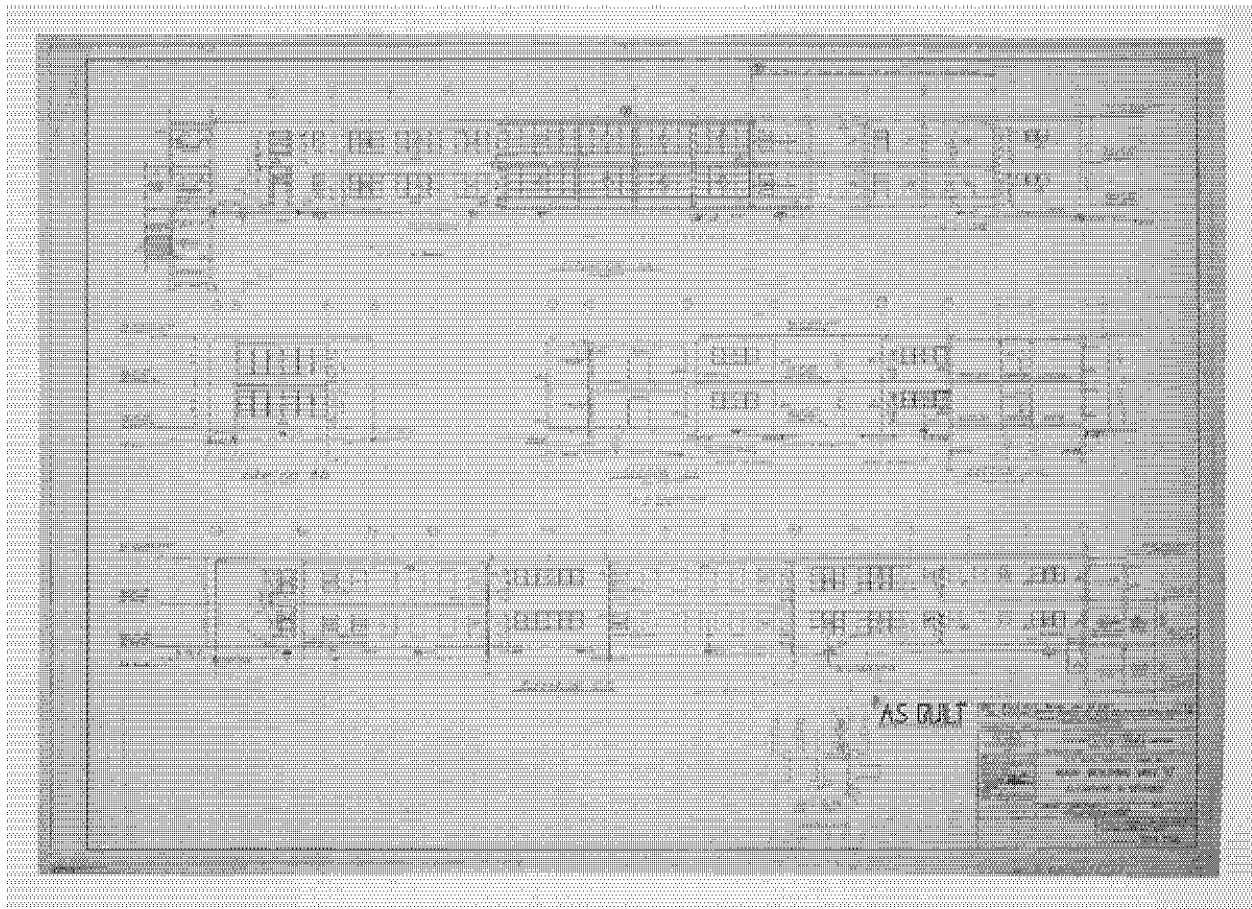
WING A ELEVATION AND SECTIONS



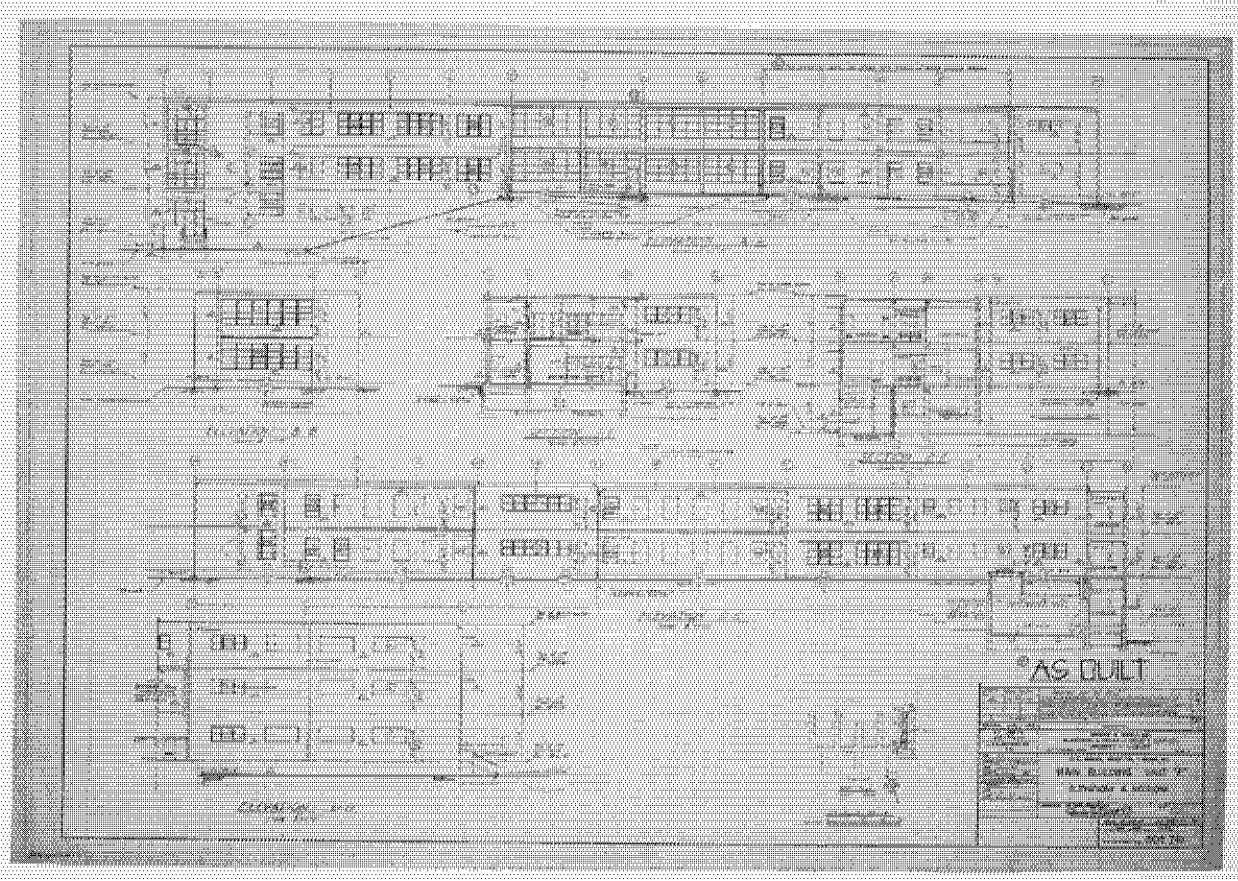
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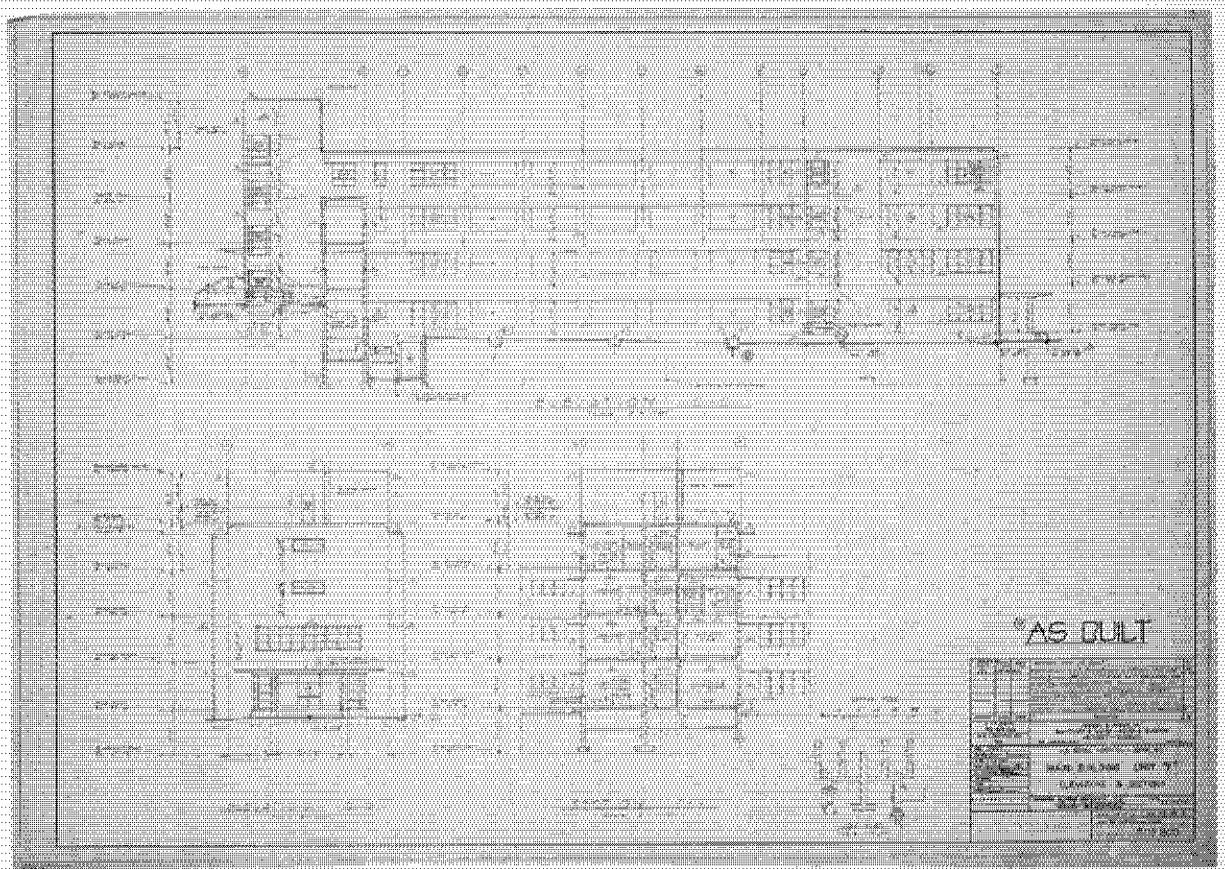
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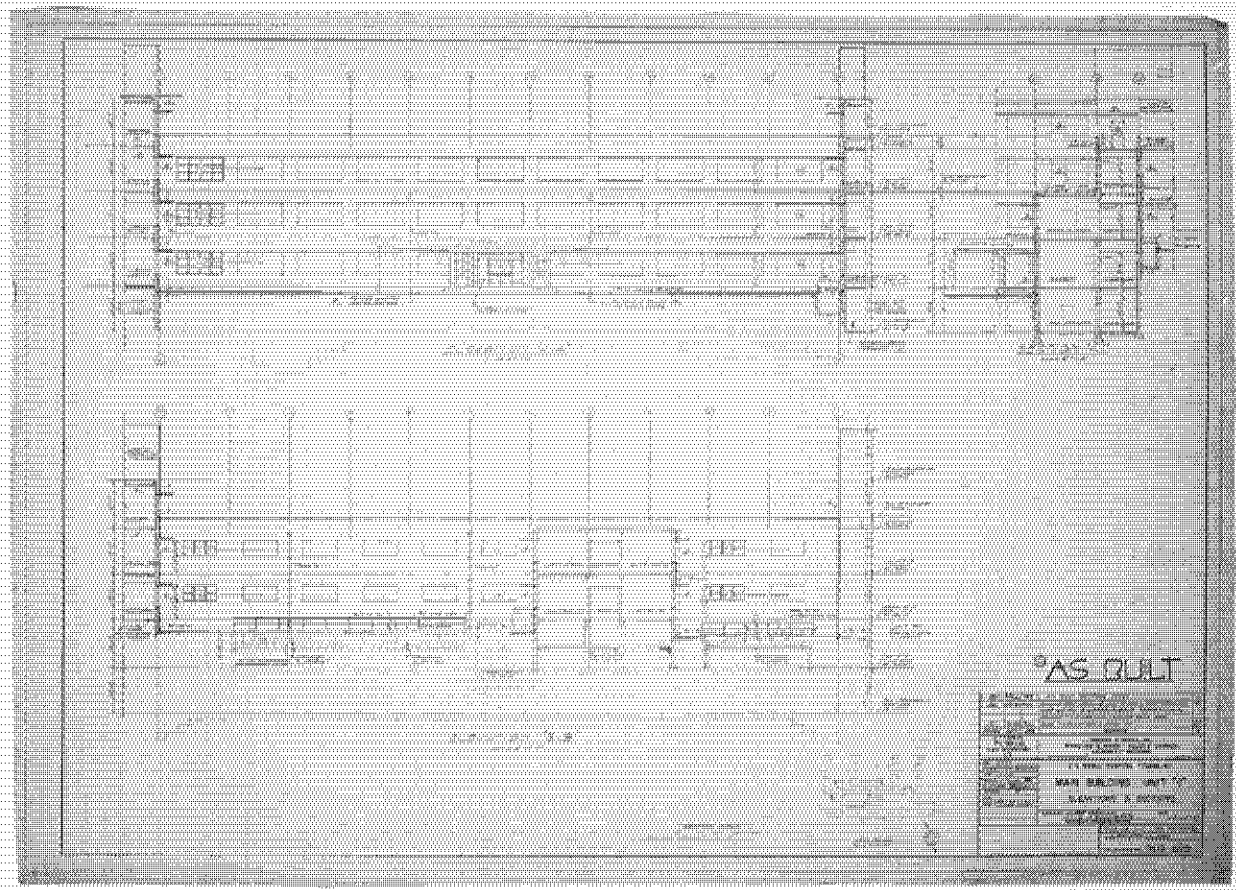
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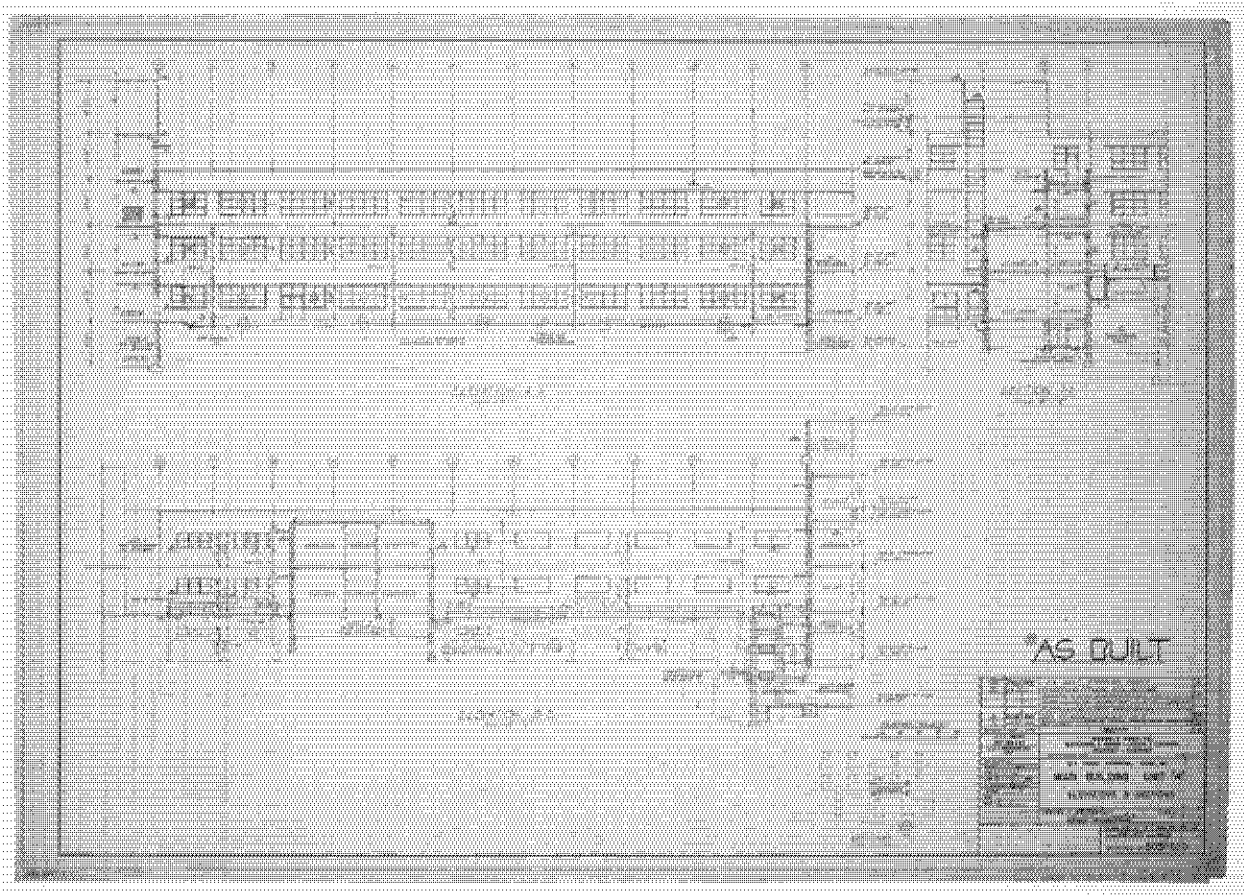
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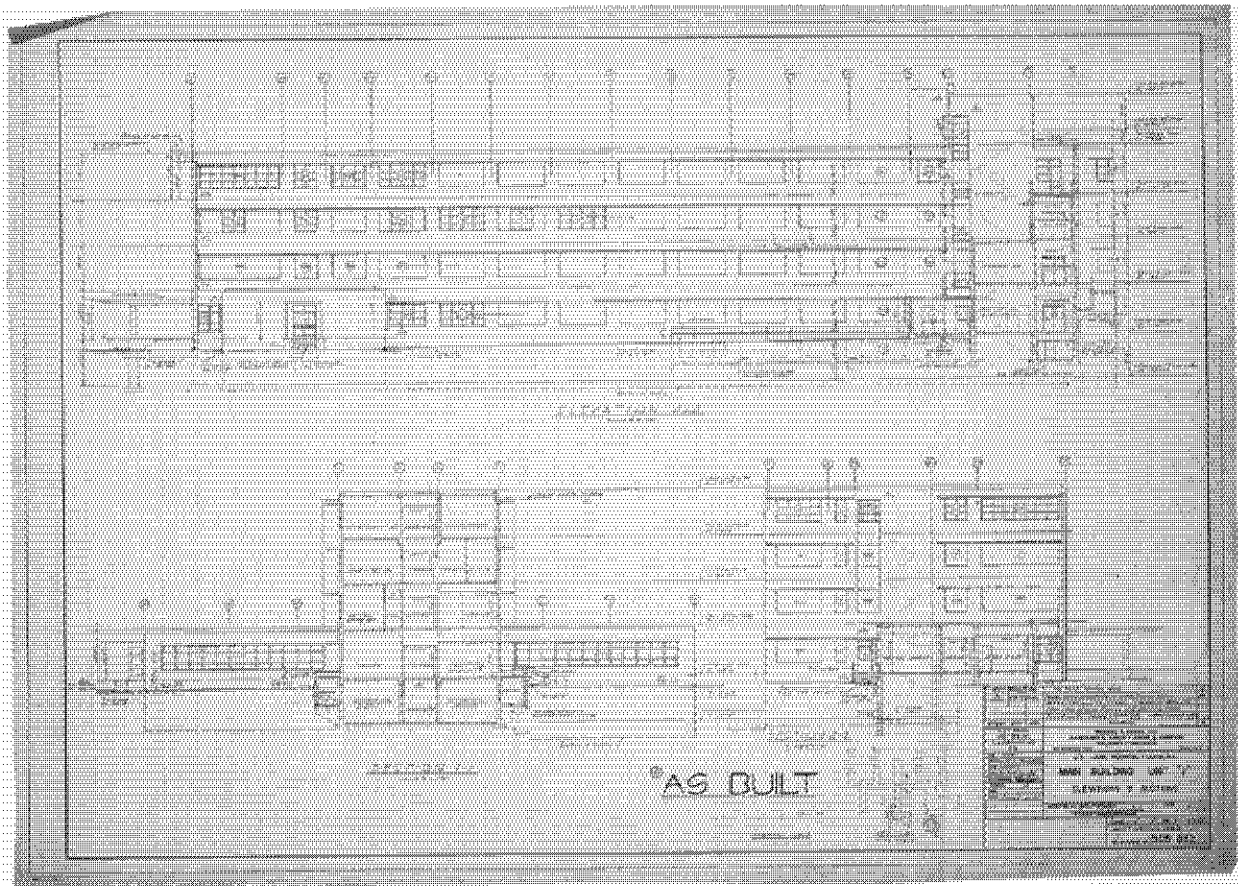
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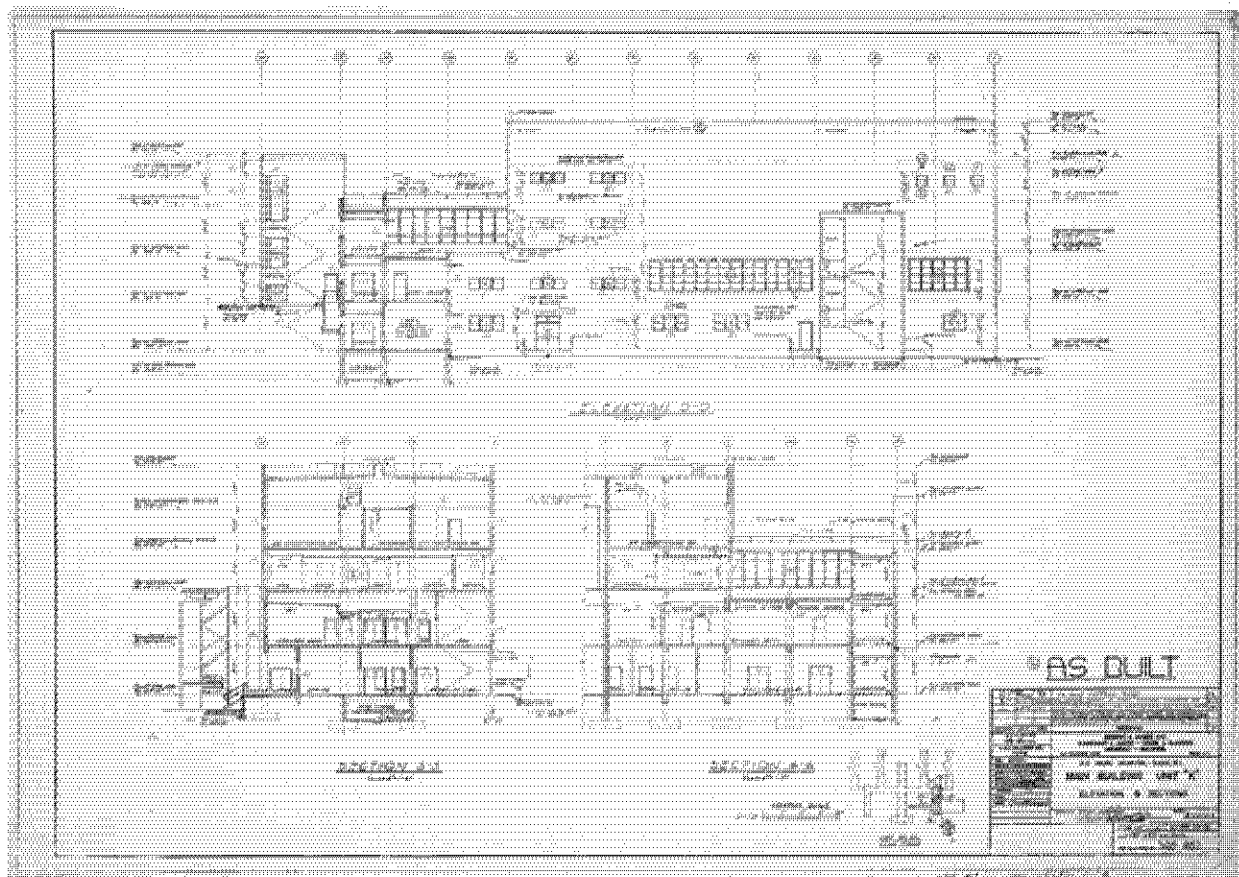
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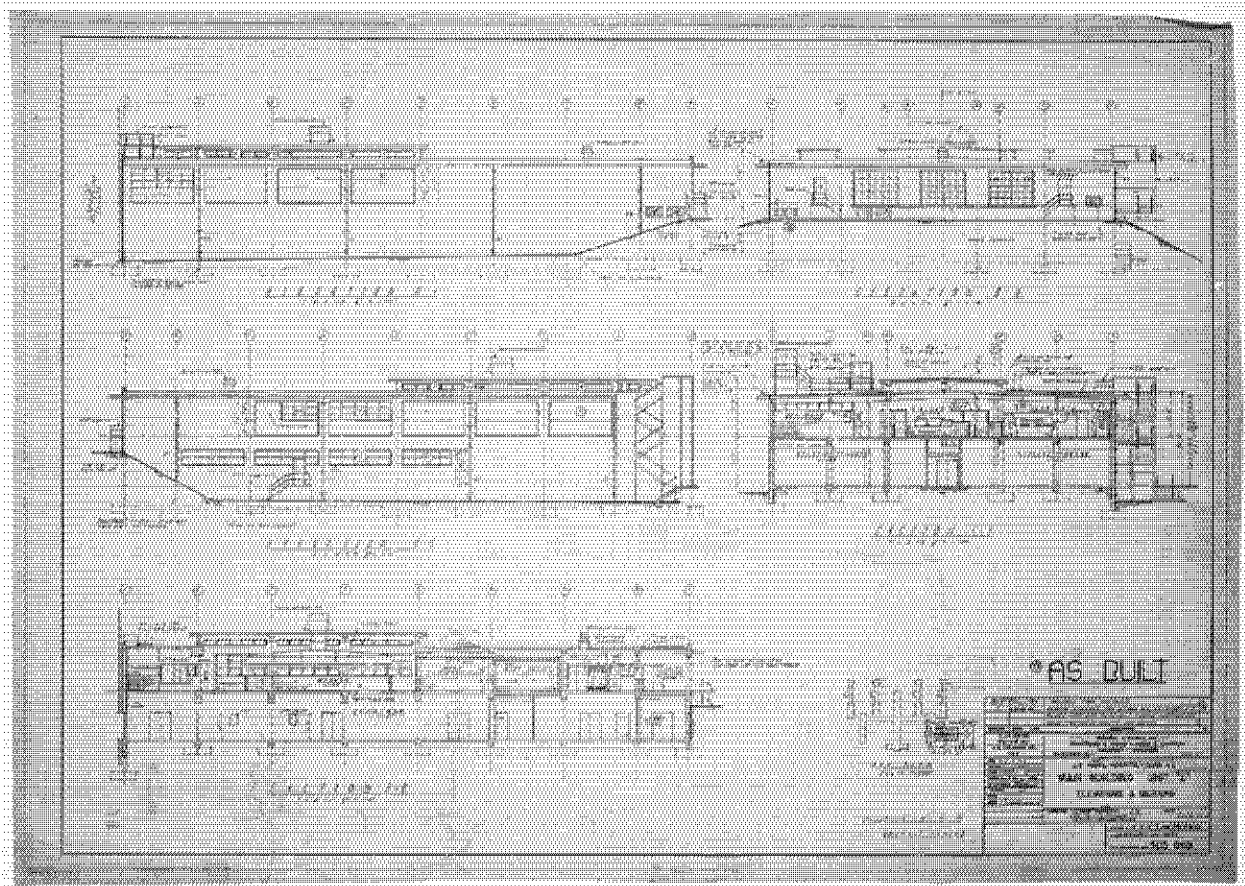
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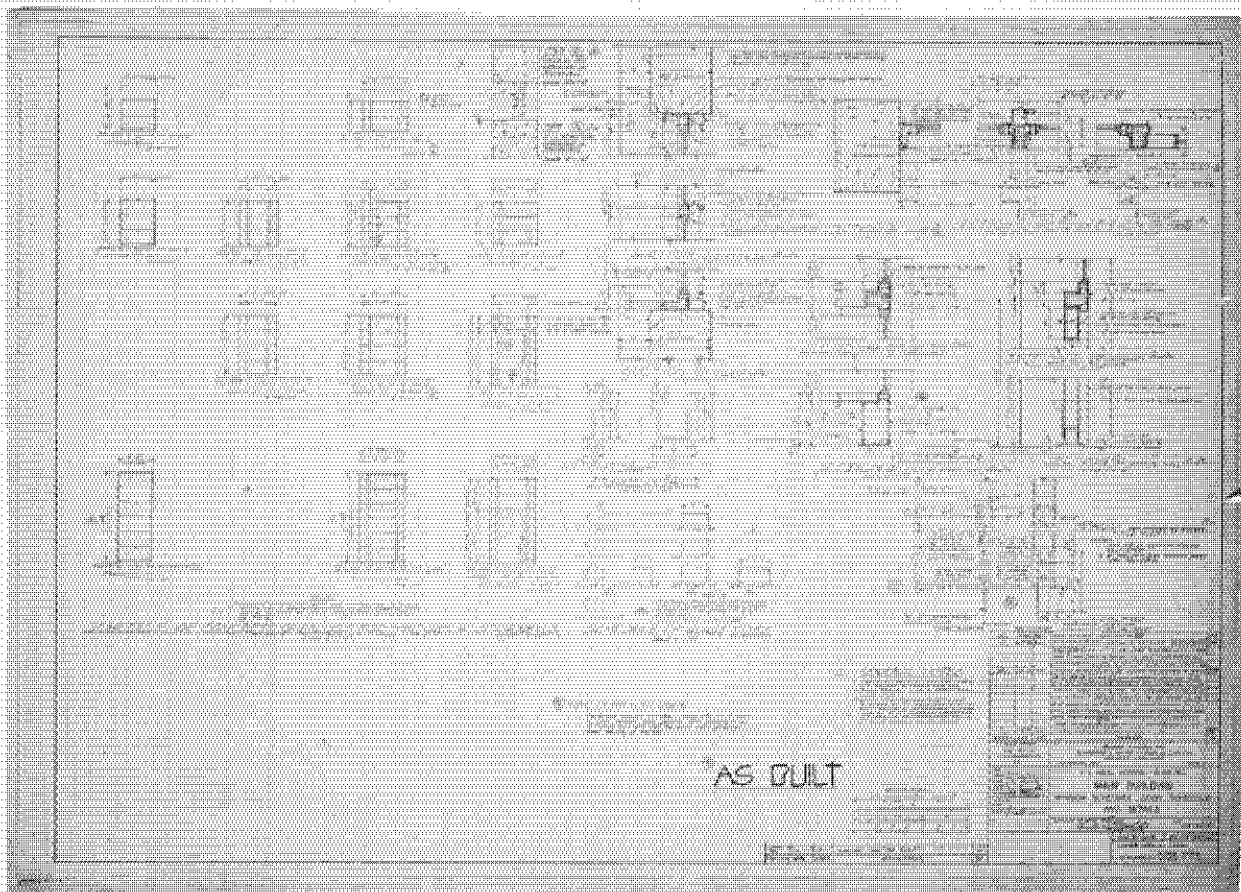
WING J ELEVATION AND SECTIONS



WING K ELEVATION AND SECTIONS



WING L ELEVATION AND SECTIONS



WINDOW SCHEME, DOOR SCHEDULE AND DETAILS